Near Portsmouth, at Aquidneck, three beds are reported to exist, 2' to 20' thick, and at Case's, one of the three is 13' thick; at Providence, one, of 10'; at Valley Falls, five, 6' to 9'; at Cumberland, two, 15' to 23'; near Mansfield, several, with the maximum thickness 10'. The earliest opening was made at Case's, near Portsmouth, in 1808.

At Worcester, Mass., an independent coal area, there are mica schists and graphitic slate, with remains of a species of Lepidodendron.

Cape Breton, Nova Scotia, New Brunswick. - A large part of Cape Breton and the northern half of Nova Scotia, and more than two thirds of New Brunswick, are covered by the coal formation. The chief of the coal mines are in Nova Scotia, in the Picton. Colchester, and Cumberland districts. In New Brunswick, the formation is thin and vields little coal. At the Joggins, in the Cumberland district, the beds, according to Dawson, rest on 3000' of Subcarboniferous beds, have a thickness of 13,000', and are made up of sandstone, conglomerates, shales, and impure limestone. Of the whole, 5000' to 6000' pertain to the conglomerate or Millstone grit, 4000' to the Lower Coal-measures, and 3000' to the Upper, a large portion of which is regarded by Dawson, on account of the fossils, as Permian. In the series, there are 76 dirt-beds and coal-seams, indicating as many levels of verdant fields or marshes. Each dirt-bed is a clayey layer with stumps of Stigmariæ and other plant remains; but only 15 contain any coal. The main coal-bed at the Joggins is only 5' thick, with a foot or so of clay along the middle. The Permian at Pictou has a thickness, according to Fletcher, of 1146', but on John River, near the boundary of the Colchester district, 8107'. For a detailed report on the Pictou and Colchester districts, by Fletcher, see Can. Geol. Rep. for 1890-91.

The Millstone-grit portion includes thick beds of coarse gray sandstones, containing prostrate trunks of Coniferous trees in its upper and middle parts, with red and comparatively soft beds in its lower; many layers of coaly shale occur throughout, but no coal-beds. At Pictou, where the beds dip 20° or more, the mean thickness of the main coal-bed is 38'; of another, 159' below, $15\frac{1}{2}$ '; and 280' below this occurs the McGregor seam 12' thick. The total thickness of the Carbonifererous is about the same as at the Joggins (Dawson).

A Carboniferous formation without coal is the great fact for the western half of the continent. Beyond the Mississippi, near the meridians of 97° to 101° W., the formation, as it extends westward, becomes increasingly thinner in its coal-beds and passes beneath the Triassic, Cretaceous, and Tertiary beds of the eastern Rocky Mountain slope. The formation makes its first reappearance at the surface at about 104° W., in the Black Hills of Dakota; but it comes up destitute of coal, and is a limestone formation 400' thick, including a middle portion of sandstone, 75' thick. Moreover, through the region of the Rocky Mountains farther west, and also northward through British America, wherever the Carboniferous is to be seen, the rock is a barren limestone, or limestone and sandstone. It is widely distributed as a surface rock at the base of Archæan ridges and elsewhere, has its largest continuous area in Arizona, is widely distributed over the Great Basin in Nevada, occurs also in Utah and Montana, whence it extends northward beyond the United States boundary along the summit region of the mountains. The deposition of Mesozoic, Cenozoic, and lacustrine beds, and the extensive ejection of igneous rocks over the vast region of the United States, between the meridian of 105° W. and the Pacific, have left little of the Paleozoic formations in sight. Along the summit region the beds sest on Silurian or Cambrian beds.

The Carboniferous is the surface rock at the Grand Cañon of the Colorado. It there comprises the Aubrey limestone, as the summit portion of the lofty walls, 835' thick; below this, the Aubrey sandstone, often having cross-bedded layers for 1455'; and then the "Red-wall" limestone, having a thickness of 970' (Walcott), in all 3260'. The limestones are more or less cherty and in part shaly or arenaceous, and the upper contains some gypsum. A portion of the lower limestone, of undetermined thickness, contains Subcarboniferous fossils.